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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,133

04/04/2005

Makoto Yamada

14321.68

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07/06/2006

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EXAMINER

RAHLL, JERRY T

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 07/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/530,133

Applicant(s)

YAMADA ET AL.

Examiner

Jerry T. Rahll

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/29/05</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on January 20, 2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Drawings***

2. The drawings submitted have been reviewed and determined to facilitate understanding of the invention. The drawings are accepted as submitted.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,967,416 to Esterowitz et al.
5. Regarding Claims 1, 10, and 19, Esterowitz et al. describes a fiber laser spontaneous emission source and amplifier using an optical fiber doped with a rare-earth element (Thulium) having a laser transition level, where the fiber laser employs a pumping source for exciting thulium from  $^3H_6$  to  $^3H_5$  excitations as pumping source, and the fiber operates in the 2.3  $\mu m$  band (see Figures 1-2 and Columns 1-3).

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6. Regarding Claims 2, 11, and 20, Esterowitz et al. describes the fiber as a non-silica based fiber with a glass that has a nonradiative relaxation rate less than that of silica glass (see Columns 3-4).
7. Regarding Claims 3, 12, and 21, Esterowitz et al. describes the fiber as a fluoride fiber (see Column 2).
8. Regarding Claims 4, 13, and 22, Esterowitz et al. describes using laser transition at least from  $^3F_4$  to  $^3H_5$  level (see Figure 2).
9. Regarding Claims 5, 14, and 23, Esterowitz et al. does not specifically describe the fiber device operating in the 18.  $\mu$ m band wavelength region. However, the device described by Esterowitz et al. would inherently have such operation due to the changes from the  $^3F_4$  to  $^3H_5$  level and the  $^3H_4$  to  $^3H_5$  level (see Figure 2).
10. Regarding Claims 6, 15, and 24, Esterowitz et al. describes transition from the  $^3F_4$  to  $^3H_5$  level and the  $^3H_4$  to  $^3H_5$  level (see Figure 2).
11. Regarding Claims 7, 16, and 25, Esterowitz et al. describes a fiber laser spontaneous emission source and amplifier using, as a gain medium, an optical fiber doped with a rare earth element having a laser transition level, where the fiber is doped with thulium and operates in the 2.3  $\mu$ m band, and where the laser uses 0.8  $\mu$ m band light as a pumping source, and the fiber is a non-silica based fiber that uses glasses having a nonradiative relaxation rate caused by multi-phonon relaxation (see Figures 1-2 and Columns 1-3).
12. Regarding Claims 8, 17, and 26, Esterowitz et al. describes the fiber as a fluoride fiber (see Column 2).

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13. Regarding Claims 9, 18, and 27, Esterowitz et al. describes using laser transition at least from  $^3F_4$  to  $^3H_5$  level (see Figure 2).


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry T. Rahll whose telephone number is (571) 272-2356. The examiner can normally be reached on M-Th (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Jerry T. Rahll

  
MICHELLE CONNELLY-CUSHWA  
PRIMARY EXAMINER  
6/26/06